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"NATO's Nuclear Forces: Maintaining
Deterrence in the Face of Uncertainty"

by

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A paper submitted to the Faculty of the Naval War College in
partial satisfaction of the requirements of the Operations
Department

The contents of this paper reflect my own personal views and
are not necessarily endorsed by the Naval War College or the
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Abstract of
'NATO'S NUCLEAR FORCES: MAINTAINING
DETERRENCE IN THE FACE OF UNCERTAINTY'

The paper is based on a premise that, by the mid-90s, political and economic considerations will force SACEUR to maintain theater nuclear deterrence with dual-capable aircraft alone, rather than the triad of aircraft, artillery, and short-range missiles he employs today. The paper briefly reviews today's tactical nuclear weapon (TNW) force structure and strategy, then moves to the future with a forecast of NATO's likely mid-90s TNW force structure and the role these weapons will play in future NATO strategy.

The bulk of the paper deals with potential force enhancements SACEUR might employ to maintain deterrence in the face of deep force structure cuts and reliance on aircraft as the only ground-based delivery system. It concludes with a potential framework for selecting between these various alternatives.

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INTRODUCTION

This is the best of times and the worst of times for NATO.

On the positive side, we are entering a new era of hope for long-term peace and democratic reform. Communism is in full retreat and Eastern Europe is beginning the transition to free markets and representative governments. Hopefully, history will treat the 'cold war' as an unfortunate footnote to the Second World War, and as a necessary transition to a new, more enlightened era.

But change breeds uncertainty. Even if the Soviet Union is able to make a peaceful transition to whatever fate awaits her--and this is by no means a forgone conclusion--NATO faces a difficult period as we attempt to posture our political structures and military forces to meet this promising but uncertain future.

PURPOSE

This paper deals with one component of this restructuring: the tactical nuclear weapons (TNW) NATO is likely to have in the mid-90s, and the challenges we will face in employing them to meet Alliance objectives. The central thesis is that political and economic pressures will force the Supreme Allied Commander Europe (SACEUR) to rely on a single TNW delivery system--dual-capable aircraft--rather than the triad of aircraft, missiles and artillery weapons he has today. Obviously, there are risks associated with such a radical change. The purpose of this paper is to analyze those risks and to propose some possible force enhancements SACEUR can employ to compensate for them.

ORGANIZATION

The paper starts with a brief review of the weapons and strategy NATO employs today. It then moves to the future with a forecast of NATO's likely mid-90s TNW force structure and the possible role of TNW in future NATO strategy. The paper then outlines a menu of possible force enhancements SACEUR could employ to mitigate the threat and resolve uncertainties. Finally, and most important, it proposes a framework for making the difficult decisions necessary to select from these alternatives.

ASSUMPTIONS

This analysis hinges on a few basic assumptions:

- First, that NATO will remain essentially as we know it today in terms of political and military structures. This means NATO's security function will be retained even if it is augmented by a solely European structure like the Western European Union (WEU),¹ or becomes part of a larger confederation like the Conference on Security and Cooperation in Europe (CSCE).

- Second, the 'Atlantic bridge' will remain intact. The U.S. will have forces in Europe--although they may be significantly reduced and restructured--and Western European interests will still be vital to our own.

- Third, Eastern Europe will be neutral and serve as a buffer or 'cordon sanitaire'² between Western Europe and the Soviet Union.

- Finally, the Soviet Union will have completed a peaceful withdrawal from Eastern Europe and will still be a viable national entity, even if it incorporates fewer republics and is no longer 'Soviet.'

DISCUSSION/ANALYSIS

TODAY'S TNW FORCES AND POLICY

NATO maintains theater nuclear deterrence today with a diverse mix of weapon systems. The Lance ground-to-ground missile, with a range of about 75 miles, is based in six NATO countries.³ Dual-capable aircraft (DCA) and nuclear-capable artillery are deployed in eight countries. These weapons are based in several countries to promote a sense of shared responsibility and to make it clear any aggression will provoke a 'total NATO' response.⁴

A less conspicuous deterrent is available at sea in as many as three Poseidon submarines carrying about 400 warheads. These weapons are committed to SACEUR for NATO planning, but would likely be available only after generation from port in a crisis.⁵ Additionally, it is reasonable to assume the Navy has the capability to support SACEUR with some number of sea-launched cruise missiles (SLCMs) deployed on submarines and/or surface ships. These sea-based forces have become more important since the Pershing II and ground-launched cruise missiles (GLCMs) were eliminated in the Intermediate-range Nuclear Forces (INF) treaty, and might play an even bigger role in the future.

The NATO strategy of 'flexible response', outlined in Military Committee document MC-14/3, is intentionally ambiguous about the precise nature of an Allied response to Soviet aggression; however, the strategy makes it clear that NATO will respond with whatever level of force is necessary to defeat an attack and preserve Alliance integrity. This retaliatory

strategy, sometimes called 'deliberate escalation', includes the full range of capabilities from conventional forces through tactical and strategic nuclear weapons. Allied commanders have consistently warned that early first-use of nuclear weapons might be necessary to overcome Warsaw Pact numerical superiority.*

LIKELY FUTURE FORCES

Obviously, the world is changing. Even without an arms control agreement like the recently signed Conventional Forces in Europe (CFE) treaty, fact-of-life changes in Eastern Europe will radically alter our perceptions about the threat and how to deal with it.

To begin with, the Warsaw Pact is dead and the Soviets have agreed to remove their forces from their former allies' territory by the mid-90s. This means they will no longer have Eastern Europe as a staging area, and we will no longer face the threat of a limited-warning attack from forward-deployed forces reinforced by massive reserves from the Soviet Union. The other obvious impact is a simple function of numbers. With the Warsaw Pact gone as a functioning military alliance, the only threat NATO now faces comes from the Soviet Union itself--a considerable capability, to be sure, but still significantly diminished from what it was before.

This reduced threat, combined with anticipated breakthroughs in arms control and the political revolution in Eastern Europe, has created an atmosphere where politicians and military strategists alike are seriously questioning the legitimacy of NATO's flexible response strategy and the forces we use to sustain

it.⁷ Weapon systems that had clear political and military utility before--like the Lance and short-range nuclear artillery--are beginning to make less sense in the new European environment. Understandably, the Germans are less willing to think in terms of their country becoming NATO's tactical nuclear battlefield when the immediate threat that motivated such a desperate strategy is evaporating.

President Bush made a concession to these realities when he announced in May 1990 the U.S. would cancel its planned Follow-On to Lance (FOTL) program and halt modernization of U.S. nuclear artillery shells in Europe.⁸ In the same month, the NATO Nuclear Planning Group (NPG) set the stage for a fundamental shift in strategy by saying there is "a diminishing need for nuclear systems of the shortest range."⁹

The Alliance members formalized this shift in the "London Declaration" after a landmark meeting of the North Atlantic Council in July 1990. Among other things, this declaration declared that: "...as a result of the new political and military conditions in Europe, there will be a significantly reduced role for sub-strategic nuclear systems of the shortest range." It further stated: "...once negotiations begin on short-range nuclear forces, the Alliance will propose, in return for reciprocal action by the Soviet Union, the elimination of all its nuclear artillery shells from Europe."¹⁰

These negotiations on short-range nuclear forces (SNF) may begin late this year. The likely outcome is a total elimination of nuclear artillery shells and short-range missiles (i.e., those

with a range of less than 500 kilometers like the Lance and Soviet SS-21) from Central Europe.¹¹

In terms of practical impact on NATO's force structure, the success or failure of these negotiations is almost a moot point. President Bush's unilateral decision to terminate the Lance follow-on and artillery modernization condemns our existing systems to obsolescence and military ineffectiveness. As General John Galvin, the current SACEUR, recently put it: "...it looks to me that we will be relying on our aircraft in the future."¹² The Allies share his opinion, and there is a wide consensus developing that NATO will rely largely on DCA for theater nuclear deterrence. This will mean a very different day-to-day deterrent posture and a smaller stockpile of nuclear weapons. In fact, the future stockpile of weapons in-theater may be less than one quarter of the approximately 4000 weapons we have on-hand today.¹³

ROLE OF TNW IN FUTURE NATO STRATEGY

The changing political and military environment may also drive changes to the Alliance strategy for TNW. The London Declaration made some interesting observations on this subject:

Finally, with the total withdrawal of Soviet stationed forces and the implementation of a CFE treaty, the Allies concerned can reduce their reliance on nuclear weapons. These will continue to fulfill an essential role....by ensuring that there are no circumstances in which nuclear retaliation....might be discounted. However, in the transformed Europe, they will be able to adopt a new NATO strategy making nuclear forces truly weapons of last resort.¹⁴ (emphasis added)

On the surface, this language seems internally inconsistent. The threats of first-use and deliberate escalation still remain.

yet nuclear weapons will be relied on less and will be considered weapons of 'truly' last resort.

What this language might reflect is an understandable sense of ambivalence about the future role of TNW. The Alliance members seem hesitant to renounce their traditional reliance on nuclear weapons as the ultimate deterrent (including the linkage with U.S. strategic systems that is such a vital part of the 'Atlantic bridge'), yet they feel compelled to alter the strategy to fit the new realities. This might be partly a result of political compromise within the Alliance. It might also be a hedge against the possibility that the Soviet Union's internal transformation will take a turn for the worse and we could face a world considerably less stable than today's. Whatever the precise dynamics, the much-anticipated NATO strategy review scheduled for release this summer should shed some additional light on where NATO's policy for TNW is headed.¹⁰

Most analysts believe this review--and NATO's future strategy--will continue to rely heavily on nuclear weapons for deterrence and defense. Flexible response will likely be abandoned as the overarching strategy, but the uncertainty created by a possible escalation to nuclear weapons (no matter how remote) will be retained to promote uncertainty. One writer calls this the 'creative contribution of ambiguity.'¹¹

TNW will remain a critical component of NATO strategy, but the way we look at these weapons is likely to change. The fact that we will have much more warning time in the future means there will be more emphasis on stability and crisis management than on

warfighting. We will want to structure our forces to promote stability day-to-day, and to control tension and communicate resolve if a crisis occurs. This reflects a change from flexible response--which focuses on warfighting--to "graduated conflict control."¹⁷ Simply put, theater nuclear weapons will be viewed more as a means to deter a war than to win one.

But much of the above is philosophical commentary. The key question for a planner on SACEUR's staff is this: what practical impact will this philosophical change have on my targeting strategy and force requirements? Will I need forces that are more capable than today's, or less? Will I need to change my alert posture? Can I really rely on aircraft alone to maintain deterrence day-to-day? What capabilities do I need in a crisis when my goal is to demonstrate resolve and control tension, yet I must still posture my forces for effective warfighting? What are my targeting priorities if deterrence fails?

These are all questions central to the current debate on TNW's future role (and to this paper). Before looking at them in detail, it seems necessary to develop a list of potential force enhancements SACEUR could employ to meet the future strategy and mitigate the uncertainties deep cuts and force structure changes will bring.

A MENU OF POSSIBLE TNW FORCE ENHANCEMENTS

Listed below are possible TNW force enhancements for the mid-90s after short-range missiles and artillery weapons are eliminated from Central Europe. They are arranged from the most obvious to the more esoteric. Pros and cons are addressed, but

final conclusions on utility are reserved for the last section of the paper, which proposes a possible framework for making these difficult decisions.

- Improve Dual-Capable Aircraft Survivability and Effectiveness.

The most obvious alternative would be to enhance the single remaining ground-based tactical nuclear asset we will have in Europe. Indeed, Administration spokesmen like the Under Secretary of Defense for Policy are already calling for improvements: "Under the new conditions that we face today, a greater reliance on dual-capable aircraft and sea-based systems would be appropriate, along with measures to enhance their survivability and effectiveness."¹⁰

DCA survivability could be enhanced in several ways. First, we could upgrade their readiness. The peacetime alert status of today's theater nuclear weapons is very low, with only a small percentage on alert and ready for immediate response.¹⁰ Higher alert rates would assure quick reaction and better survivability against a 'bolt out of the blue' Soviet attack--a very unlikely scenario, but one a prudent military planner cannot dismiss out of hand.

Second, we could improve NATO indications and warning capabilities to further reduce the odds that the Soviets could achieve tactical surprise, and to improve our strategic warning to allow force generation in a crisis.

Third, we could improve DCA survivability by significantly increasing the number of airfields available for dispersal in a crisis. We can also provide upgraded, hardened shelters for these

dispersed aircraft. This is a shortfall today, and one we may not be able to tolerate when DCA are the only remaining ground-based delivery system.²⁰

Fourth, we can further upgrade NATO's air defense network. NATO's potential vulnerability to surprise air attack is underscored today by the fact that air defense assets are the only forces SACEUR has under his operational control during peacetime. The NATO Air Defense Ground Environment (NADGE) has been a high-priority issue since the early-60s, and the Alliance has come a long way in terms of integrating and automating the NADGE command and control process. Continued introduction of state of the art forces like the Airborne Warning and Control System (AWACS), late-model interceptors like the F-15C and F-16D, and Hawk and Patriot missile batteries have significantly upgraded NATO's ability to defend itself against air attack.²¹ The recent superlative performance of our aircrews, equipment and tactics against Soviet equipment and tactics in Desert Storm has further increased our confidence and must be causing a difficult reappraisal in the Soviet camp. This is an area that will require constant attention to maintain our current momentum.

In addition to improving survivability, we can enhance future DCA capabilities by upgrading their offensive potential. This can be accomplished in two basic ways: improve the aircraft or improve the weapons they carry.

The Air Force is already taking steps to upgrade its tactical bomber force in Europe. Some of the 61 FB-111s that were removed from Strategic Air Command's operational inventory may be used to

augment the aircraft already in-theater.²² More important, 48 of the F-15E Strike Eagles that performed so well in Desert Storm will deploy to the United Kingdom in 1992. Unfortunately, these qualitative upgrades come at the expense of force structure reductions. The F-15Es will replace a larger wing of F-111Fs at RAF Lakenheath, and the Air Force has already announced plans to close a wing of 70 F-111Es at RAF Upper Heyford.²³ However, the base will be maintained in care-taker status and there is always the possibility the aircraft could redeploy from the continental U.S. (CONUS) in a crisis--a capability that may become critical as we look at possible offsets to uncertainties in the future NATO environment.

For the longer-term, the Air Force is also investigating the possibility of converting its newest air-to-air fighter, the Lockheed YF-22A, to a ground-attack role. This may be necessary to offset cancellation of the Navy's A-12 program, which the Air Force was planning on deploying as its next-generation attack aircraft.²⁴

The biggest shortfall in today's TNW inventory--and the one that will have the biggest negative impact in the future--is the lack of a nuclear-capable tactical air-to-surface missile (TASM) for our bombers.²⁵ A standoff weapon is a true force multiplier. It will dramatically increase the service life of our current bombers like the F-111, F-15E and Tornado by allowing them to conduct their mission without penetrating the most heavily defended enemy areas (just as the Air-Launched Cruise Missile (ALCM) allows us to continue operating B52 strategic bombers

today). It will also improve the effectiveness of newer, stealthy platforms like the F-22 by extending their range and complicating the enemy's defensive problems.

Unfortunately, the present TASM candidate, the Short-Range Attack Missile-Tactical (SRAM-T), is encountering serious political and technical problems. This system, which has been under development since 1983, is basically a tactical version of the SRAM II being developed for the U.S. strategic bomber force. It will have a standoff range of 400-600 kilometers and could be deployed on F-111s, F-15Es, and British, Italian or German Tornados. Boeing has had development problems with the missile and the Air Force is reportedly looking at alternative systems. Additionally, Congress is losing enthusiasm for the system given recent political developments in Europe and there is serious doubt about some Alliance members' willingness to have this new system based in their country.^{2*}

There are opportunities for NATO to enhance the survivability and effectiveness of its dual-capable aircraft. Whether or not we will take advantage of these opportunities will be a function of political resolve and perceptions about remaining threats to Alliance interests.

- Expanded use of naval forces.

The other most obvious option is to expand NATO reliance on tactical nuclear weapons based at sea. This is certainly not a new subject, although it is a contentious and complicated one. Since the INF treaty, a great deal of time and energy has been expended debating the relative merits of increased emphasis on

sea-based forces to offset force structure reductions in our ground-based forces. The most frequently mentioned candidate to accomplish this is the SLCM.

From a strictly technical standpoint, the SLCM is a wonderful weapon system. It is a proven technology that can be employed on survivable platforms to hold a wide range of critical targets at risk, including those deep within the Soviet land mass:

U.S. SLCMs launched from a single submarine in the middle of the Barents Sea could destroy all northward- and westward-looking Soviet early warning radars, bomber staging bases, the long-range ABM radars surrounding Moscow, and some key Moscow command and control facilities.²⁷

In addition to its offensive potential, the SLCM presents the Soviets with an almost insurmountable defensive problem. They cannot threaten the platform that carries it (at least, in the case of our attack submarines), it can be launched from multiple attack azimuths, and the odds of being able to find and destroy it once launched are very slim indeed. The current U.S. plan is to produce about 100 submarines and 100 surface ships capable of carrying the nuclear variant of SLCM.²⁸

The SLCM can even be categorized as a 'stabilizing' weapon system because it is deployed on systems that are not vulnerable to preemptive strike--and therefore, do not produce a 'use or lose' pressure for decision-makers--yet it is a relatively slow-arriving system not suited for a surprise first-strike intended to disarm the enemy.

The potential problems in using SLCM as an offset for ground-based systems fall into two categories: competing roles and missions in our own Navy and Soviet perceptions.

The same authors who tout the SLCM's tremendous technological potential admit to some conflicts in terms of roles of missions for the platforms that carry it. This is a problem the Navy has already had to confront in trying to define the SLCM's proper role for strategic deterrence: "To preclude any possibility of conflict with general purpose missions, the TOMAHAWK is not part of the Single Integrated Operational Plan (SIOP)...²⁹

In simple terms, the Navy does not want to accomplish the SLCM power projection mission at the expense of critical sea control functions like sinking Soviet ships and submarines. This is perfectly understandable in the case of a high-value asset like an attack submarine, but it means the SLCM cannot be preplanned for a specific target in a specific CINC's theater. This has obvious limitations for the strategic role today and the theater role in the future. As one writer puts it: "...ways must be found to make this system more responsive to the needs of the theater commander if it is to play an important role in theater deterrence."³⁰

The problem with Soviet perceptions is more esoteric but no less important. First of all, the Soviets have made it abundantly clear that they consider SLCM destabilizing and want it eliminated in an arms control agreement. One man's stability is another man's nightmare, and they fully appreciate the technological capabilities outlined above. According to one recent Soviet article: "As long as it remains unresolved, efforts in other nuclear disarmament areas may well be rendered meaningless."³¹

Fortunately, the U.S. has so far been unwilling to consider a ban on SLCM. We cannot hold our own systems hostage to Soviet arms control goals (after all, arms control is just one tool to promote national security--it is not an end in and of itself); however, Soviet attitudes toward SLCM are relevant from an operational perspective. If our new strategic priorities for TNW are day-to-day stability and crisis management, we must ensure the systems we deploy do not undercut those goals.

If used, SLCM must be deployed in such a way that the Soviets will know it is there, otherwise it will have no deterrent effect. (This is not a minor consideration. Lack of visibility was the primary reason NATO decided in 1979 to deploy the Pershing II and GLCM as a counter to Soviet SS-20 deployments, rather than relying on SLCM technologies that were emerging at that time.³²) Yet it must not be perceived as such a destabilizing counterforce threat that the Soviets feel an incentive to preempt in a crisis. Both of these considerations will be addressed in the following section on a potential framework.

The other obvious contribution from sea-based assets would be expanded use of carrier-based strike aircraft. Unfortunately, the problem with conflicting roles and missions is even more pronounced in this case. The Carrier Battle Group is the Navy's premier force for sea control and power projection in conventional conflict. It is unlikely they would dedicate carrier assets to a theater CINC for preplanned tactical nuclear missions against deep, heavily-defended targets. This would undercut the conventional power projection mission outlined in the Navy's

Maritime Strategy--which focuses on Soviet maritime power and war on the flanks--as well as the other missions discussed above.³³

This kind of commitment would also force the carriers to operate within the range of Soviet land-based strike aircraft (so that the carrier's own aircraft could range their targets) and would guarantee that the Soviets would make them a top priority to eliminate their nuclear potential. Obviously, these are problems the Navy already faces, but they would be exacerbated by the reduced flexibility that would come from a firm commitment to support SACEUR in a tactical nuclear role.

- Generate tactical nuclear forces from CONUS in a crisis.

A third alternative would be to generate and deploy TNW from CONUS that were stockpiled there in peacetime for political or economic reasons.

In theory, this could include short-range missiles and artillery weapons. However, we should press for a SNF treaty that calls for the outright destruction of these weapons (just as the INF treaty did for Pershing II and GLCM). We would not want to let the Soviets simply move their entire SNF arsenal east of the Urals to comply with a treaty that only encompassed Central Europe, then face the prospect of a massive redeployment in a crisis. In other words, we should not repeat our mistakes in CFE.

The more likely candidates for redeployment would be land-based aircraft and their weapons (both gravity bombs and stand-off missiles). These forces would be stationed in the U.S. during peacetime but could deploy to Europe--or any other theater--within days in a crisis. Obviously, we would have to maintain an

adequate base infrastructure in Europe to support these additional forces after deployment.³⁴ Maintaining RAF Upper Heyford in a 'warm' caretaker status would be a good example.

This type of arrangement would allow us to comply with our allies' obvious desire to adopt a more benign peacetime force posture, but would preserve flexibility in a crisis when political considerations might become secondary to the need to reconstitute our TNW capabilities to promote deterrence.

- Expanded use of SIOP forces.

U.S. strategic systems have always played an important role in Europe as a final rung in the escalatory ladder and an ultimate guarantee of U.S. commitment. It is possible their relative importance will increase in a regime where all ground-based TNW except aircraft are eliminated.

There is a precedent for a direct involvement by U.S. strategic forces. The previously mentioned 400 Poseidon weapons allocated to SACEUR would dramatically increase the CINC's warfighting capabilities in a crisis. (Although their deterrent contributions have always been in question given the fact they are concealed and, if used, would be indistinguishable from a strategic nuclear strike.³⁵) However, as Poseidon submarines are eliminated from the U.S. force structure this capability will atrophy. It seems unlikely the U.S. will replace them with Trident weapons after the Poseidons are all retired, especially given the limited sea-based force structure we will have and the critical contribution these weapons make to the SIOP.

A more likely candidate would be strategic bombers with air-launched cruise missiles forward-deployed in Europe.³⁶ These aircraft would provide a more visible deterrent than submarines, although we would have to carefully weigh their escalatory potential and possible degradates to the SIOP.

- **Augment with emerging technologies.**

The most esoteric offset for SNF forces would be to rely on emerging conventional offensive and defensive technologies to enhance theater nuclear deterrence.

Some technologies that would have seemed like magic a decade ago are a reality today. Precision-guided munitions (PGMs) and stealth proved their worth in Desert Storm and will play an even larger role in future conflicts. Some weapons, like the Navy's 50-mile, highly accurate, conventional Standoff Land Attack Missile (SLAM) are still in the prototype stage but were used effectively in the Gulf.³⁷ Other systems, like the Army's conventionally-armed Advanced Tactical Missile System (ATACMs) are in the final stages of development and will pose a real challenge for U.S. negotiators attempting to eliminate short-range nuclear missiles without prohibiting new conventional technologies.³⁸

But stealth and PGMs are only the cutting edge of a true revolution. Given the geometric growth of technologies related to charged particle beams, microwave weapons, lasers, very high-speed integrated circuits, robotics, electromagnetic 'rail guns', etc., it is reasonable to assume there are many other systems looming on the horizon that will revolutionize military capabilities.³⁹ Still other systems, like a GLCM with a range of less than 500

kilometers, offer the potential to circumvent the SNF treaty with proven but unexploited technologies.⁴⁰

The relevant question for the issue at hand--how to offset reductions in ground-based SNF--is a resounding 'so what?' How will these new offensive technologies allow us to compensate for the loss of short-range nuclear systems? In truth, it is difficult to see how they will have much impact.

Some strategists promote emerging offensive technologies as a way to augment nuclear weapons because today's highly accurate conventional weapons can credibly threaten some categories of targets that previously were only held at risk by nuclear weapons. The problem with this concept is one of 'saliency.'⁴¹ Put simply, it takes a nuclear weapon to deter a nuclear weapon. Highly accurate conventional weapons will no doubt enhance NATO deterrence below the nuclear level (as any honest Soviet planner would admit after watching Desert Storm), but it is difficult to imagine a credible impact on nuclear deterrence.

The possible contribution of defensive technologies is a little easier to visualize. A limited defense against ballistic missiles now seems achievable with ground- and space-based nonnuclear, hit-to-kill interceptors.⁴² Such a system would be far from leak-proof, but could intercept a percentage of Soviet missiles. The intent would not be to put an impenetrable shield over CONUS and NATO, but to create enough uncertainty about their ability to achieve their war aims that the Soviets would not attack in the first place.⁴³ This could be a significant contribution to deterrence given the fact that the majority of the

day-to-day Soviet nuclear threat to NATO following the SNF treaty will come from the ballistic missiles in their Strategic Rocket Force (the Soviets have never made the distinction between theater and strategic applications for their ballistic missiles that we do for ours.)

The preceding section was intended as a brief review of possible TNW force enhancements. It is by no means all inclusive, nor does it adequately examine the pros and cons of the few options presented. What it does provide is a reference point for a possible framework to make value judgments about the relative merits of various alternatives.

A FRAMEWORK FOR SELECTING FUTURE TNW ENHANCEMENTS

In some respects, a new NATO strategy that emphasizes stability and crisis management will put greater demands on our tactical nuclear weapons. Because this new philosophy deals more with perception management--and because it is highly sensitive to a wide range of potential scenarios involving strategic warning, force generation, and political tension--we will need to become more sophisticated in making judgments about force requirements.

What we are really talking about is a need to deploy forces that will promote deterrence through a spectrum of possible scenarios. Capabilities we may put a premium on in wartime or deep crisis (e.g., a highly credible SLCM threat) may be undesirable and destabilizing in peacetime.

In trying to put some bounds on this dilemma of "evolving force premiums", it seems that there are three situations we must consider: 1) deterrence in peacetime; 2) deterrence in crisis; and

3) effective warfighting if deterrence fails. It is important to remember that all of the following is based on the assumptions outlined at the beginning of the paper (e.g., a neutral Eastern Europe and a non-belligerent, reorganized Soviet Union).

- **Deterrence in peacetime.** This could be described as a period of peaceful equilibrium. NATO and the USSR have differing goals, but both are interested in pursuing their objectives through normal economic and political means. Forces on both sides are in day-to-day readiness. Barring some unforeseen catastrophe (e.g., failure of a positive control system or a third-party act of nuclear terrorism) the use of nuclear weapons is extremely unlikely.

In this situation, cost considerations and political factors will have a major impact on TNW force structure decisions. The premium is on forces that are non-provocative and provide a minimal but effective deterrent. Nuclear weapons are still necessary to deter Soviet use of nuclear weapons (what some would call 'existential' deterrence), and to provide a credible 'powder trail' from regional conflict to U.S. central strategic systems.⁴⁴ The emphasis is on stability. One important caveat: the forces that we rely on day-to-day must be highly survivable and pose a credible retaliatory threat against high-value military and leadership targets. All targets are preplanned and located in the Soviet Union.

- **Deterrence in crisis.** This is a situation where some unanticipated global event (e.g., the October 1973 Arab/Israeli war) causes both sides to generate their forces as a show of

resolve and/or to prepare for possible hostilities. The situation may be highly unstable, depending on the severity of the crisis and the threat both sides perceive to their vital interests. Neither side wants to take steps that are so provocative they will precipitate war, yet each feels compelled to generate and deploy forces to demonstrate resolve and prepare for war if it comes. The situation could degenerate rapidly, so the emphasis is on crisis management. Neither side wants conventional conflict to occur, but if it does, the emphasis will be on limiting the scope of the war as much as possible. Nuclear forces are brought to a high state of readiness to deter conventional conflict and enemy first-use of nuclear weapons.

In this situation, cost and political considerations take a back seat to military requirements. The premium is on forces that promote stability in a rapidly deteriorating international environment. This means forces that can be generated and dispersed in secure deployment modes to increase total force survivability and available weapons, yet forces that will not create an incentive for preemptive first-use either through miscalculation or an act of desperation. Generated forces should be able to sustain high alert rates for an extended period without significant degrades to operational effectiveness. Essentially, NATO must have the capability to regenerate a credible flexible response capability.

The targeting priority for preplanned targets is on the full range of nuclear and conventional military capabilities in the Soviet Union. The objective is to deter conflict at all levels by

presenting an effective and credible tactical nuclear warfighting capability. A full range of highly selective response options is available for symmetrical response to enemy attacks. In addition, a flexible ad-hoc capability exists to employ TNW against emerging targets both inside and outside the Soviet land mass. Finally, NATO will retain an option for first-use of nuclear weapons as a truly last resort.

- **Effective warfighting if deterrence fails.**

This is a situation where theater nuclear deterrence has failed and the Soviet Union and NATO have employed TNW against each other. The NATO objective is to control escalation as much as possible and to terminate hostilities on favorable terms, with no possibility of post-war nuclear coercion.

The premium is on forces that are survivable and flexible enough to allow SACEUR to respond effectively at any level of conflict necessary to counter the Soviet aggression, yet minimize collateral damage as much as possible. The key to effective warfighting is successful generation of the highly capable forces described in the crisis phase. Options for preplanned and ad-hoc targets are executed in accordance with the targeting priorities outlined in the previous phase.

CONCLUSIONS AND RECOMMENDATIONS

Using the framework outlined above, it is possible to develop some general force structure recommendations for SACEUR to offset the uncertainties he will face after short-range missiles and artillery weapons are eliminated from NATO's force structure.

- Forces to maintain deterrence in peacetime. SACEUR can rely on dual-capable aircraft, but survivability and effectiveness upgrades are essential to provide high confidence deterrence and to hedge against the uncertainties associated with reliance on a single delivery system (e.g., sudden Soviet offensive or defensive breakthroughs that threaten DCA effectiveness, or a catastrophic failure of NATO's strategic warning system.

Specifically, NATO should increase peacetime DCA alert rates and develop an extensive network of airfields with hardened shelters. We must also continue aggressive upgrades to the NATO air defense network. It is essential that NATO deploy an effective standoff missile in the TASM category to extend the service life of existing aircraft and enhance the effectiveness of future aircraft. Credible deterrence with DCA alone cannot be assured without this offensive upgrade. Finally, aggressive research should continue on a limited ballistic missile defense with an eye to deployment as quickly as possible consistent with fiscal realities and the political desires of our allies.

In a peacetime environment, the SLCM's lack of "salient" contributions to deterrence, and the considerable practical problems associated with conflicting roles and missions, outweigh its warfighting attributes. Dedicated SLCM assets are not required in peacetime.

- Forces to maintain deterrence in a crisis. NATO should focus on a reconstitution strategy that allows us to rapidly regenerate a credible flexible response capability in a crisis. DCA alone are not sufficient in this case.

Specifically, NATO must maintain an infrastructure that will support additional DCA and their weapons deployed from CONUS or another theater.

Additionally, the Navy must dedicate a certain number of SLCM-carrying attack submarines that will chop to SACEUR in a crisis and remain within predesignated patrol areas. These forces will be allowed to conduct ancillary functions within their patrol areas (e.g., sea control) so long as survivability and responsiveness to the preplanned SACEUR strike role are not degraded. This determination will be left to the discretion of individual commanders. Remaining SLCM-carrying submarines will be predesignated as reserve assets and will be used for adaptive planning when available. Surface vessels are not required for a preplanned SLCM role, but will be used for ad-hoc planning and the reserve role as appropriate.

An additional naval commitment for dedicated carrier strike assets is not required, nor will SIOP-committed forces be assigned a dual-role in support of SACEUR (this includes CONUS bomber forces).

- **Forces for effective warfighting.** Forces outlined above will suffice. They will be planned for execution against the full range of high-value military and leadership targets.

In summary, the new NATO environment will pose unique challenges as well as opportunities. We can maintain acceptable risk if we think with imagination about how to structure our forces, and ensure that we put a premium on capabilities that will promote stability through the full spectrum of deterrence.

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